

Docket No. SC-0105

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REMARKS

The Examiner is thanked for the Office action of 4.17.2007. Claims 1-9, 15, and 19 are currently pending in the application. Claims 1-5, 15, and 19 are allowed. Claims 6-9 stand rejected. The rejections are respectfully traversed, and favorable reconsideration based on the following comments is respectfully requested.

I. Rejections of claims 6-7 and 9 under 35 USC 102(b) as anticipated by Scherbatskoy, USPN 5390153.

Claim 6 states:

6. A downhole assembly which indicates a failure condition, comprising:

a valve capable of irreversible movement which affects mud flow impedance from a first state which is initially present during normal drilling into at least one intermediate state having reduced mud flow impedance which indicates a failure condition, and thereafter irreversibly into a final state, which returns mud flow impedance to substantially that seen during normal drilling.

[Emphasis added.]

Examiner rejects claims 6-7 and 9, stating that Scherbatskoy teaches a "...valve (40) capable of irreversible movement (the valve can be made to be irreversible, since the functional limitation is not positively recited)...."

Applicant respectfully submits that Scherbatskoy's failure to state that the valve is not irreversible does not teach or suggest an irreversible valve. That is tantamount to saying that, because Scherbatskoy does not expressly disclaim a limitation, then Scherbatskoy includes that limitation. By such reasoning, any limitation that Scherbatskoy failed to expressly disclaim could be read into the reference. The valve of Scherbatskoy, as discussed below, appears to operate by reversible movement.

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The standard for presenting a *prima facie* case of anticipation under US patent law has been stated, for example, in *In re Bond*: A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

In the present case, Scherbatskoy does not show “every element” of the claimed invention “identically shown” and arranged as they are in the claim. Scherbatskoy fails to teach changes in the mud flow impedance by irreversible movement of a valve as claimed in claim 6. As addressed below, Scherbatskoy relies on a valve that appears only to function by reversible movement. Scherbatskoy states at col. 9, lines 46 and 47:

“FIG. 4B shows the valve 40 in the open condition; whereas in FIG. 4A it is closed.”

Scherbatskoy’s summary of invention describes the rapid opening and closing of the valve in order to send signals. For example, at col. 4, lines 66-68:

Rapid or almost instantaneous openings and closings of the valve have an important and far reaching influence on the performance of a telemetering system in a measuring while drilling operation.

And at co. 11, line 40:

As was pointed out previously, the valve 40...must be very fast acting, and to drive it requires considerable power...

These descriptions of Scherbatskoy’s valve clearly refer to a valve that does not operate by “irreversible” movement. If it did operate by irreversible movement, then repeated, rapid “openings and closings” of the valve would

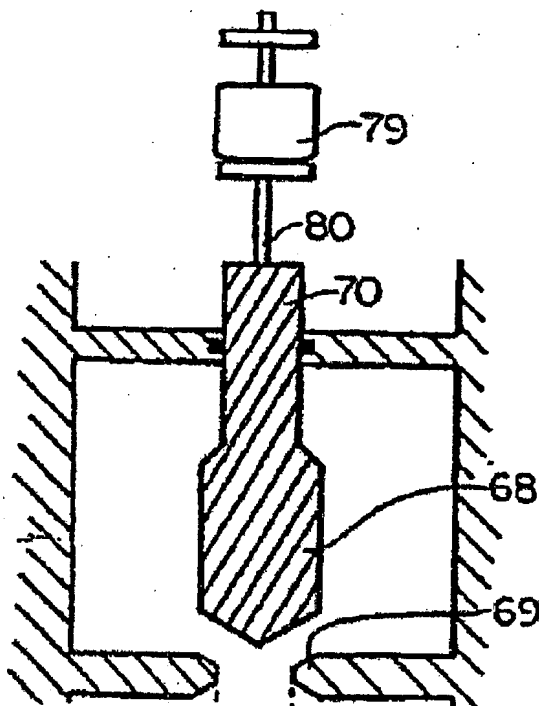
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be impossible. A prior art reference cannot be said to anticipate if that reference must be modified so as to destroy its original function.

As previously submitted, Applicant respectfully refers Examiner to Figure 4B of Scherbatskoy.

FIG. 4B



This figure shows a plug 68 which moves into position against flanges 69 to open or close the hole near 69. This opening and closing is how Scherbatskoy's invention operates, and it appears that Scherbatskoy's description requires the valve to move by reversible movement.

Therefore, it is respectfully submitted that claim 6 with all its limitations has not been shown in the cited references. Favorable reconsideration is

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respectfully requested. Dependent claims 7-9 are also therefore considered in condition for allowance, by virtue of their dependence on an allowable claim.

II. Rejection of claim 8

Some of the dependent claims also have limitations that were not shown in the cited references, and are believed allowable on their own merit. For example, claim 8 states:

8. (original): The assembly of claim 6, wherein said valve movement occurs at a time constant of at least about one second.

Examiner rejects claim 8 stating,

Scherbatskoy does not disclose the valve movement occurs at least about one second. However, the specification does not [say] the time constant is a critical value and the assembly disclosed by Scherbatskoy does not have any structural limitation to preclude a time constant of 1 second...

Applicant respectfully refers to Scherbatskoy at column 16, beginning at line 6, which describes the criticality of a very rapid valve movement, and which teaches away from a time constant near 1 second:

As has been pointed out previously in this specification, very fast operation of the valve 40 of FIG. 4A is important. The requisite shock wave will not be produced if the valve operation is slow.

Applicant therefore respectfully submits that Scherbatskoy teaches away from the limitations of claim 8, because Scherbatskoy's function of rapid valve openings and closings to transmit a shock wave would be destroyed by such a modification of Scherbatskoy. This detail exemplifies one important difference between the teaching of Scherbatskoy and the embodiment of claim 8--namely, that Scherbatskoy operates by transmitting shock waves, while the

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embodiment of claim 8 operates by modifying downhole mud flow impedance. These two methods of operation necessitate different structures. The structure employed by Scherbatskoy is not suitable, for the reasons given above, to operate as an embodiment of the presently claimed invention. Scherbatskoy would need to be modified in such a way so as to destroy its stated purpose. Such modification is only achievable by reference to the presently claimed invention for use as a template. Such use of the present claims as a guide for how to modify the Scherbatskoy reference amounts to impermissible hindsight reconstruction.

Therefore, claim 8 is believed distinguished on its own merits from the cited reference. Favorable reconsideration is respectfully requested.

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Conclusion

Thus, all grounds of rejection and/or objection are traversed or accommodated, and favorable reconsideration and allowance are respectfully requested. The Examiner is requested to telephone the undersigned attorney or Robert Groover for an interview to resolve any remaining issues.

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Respectfully submitted,



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